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## Patent Abstracts of Japan

PUBLICATION NUMBER : 10298546  
PUBLICATION DATE : 10-11-98

APPLICATION DATE : 24-04-97  
APPLICATION NUMBER : 09107231

APPLICANT : TOSHIBA ELECTRON ENG CORP;

INVENTOR : SHIMIZU YOHEI;

INT.CL. : C09K 11/08 C09K 11/02

TITLE : FLUORESCENT SUBSTANCE AND ITS PRODUCTION

ABSTRACT : PROBLEM TO BE SOLVED: To enable to obtain a fluorescent substance capable of enhancing adhesive force of a fluorescent film to a base material and preventing generation of intermixed colors at the same time by adhering precipitated powdery spherical silicon dioxide on the surface of fluorescent particles by a specific method.

SOLUTION: This production of fluorescent substance comprises suspending a fluorescent substance and a treating agent (preferably a 1-4C tetraalkoxysilane such as tetramethoxysilane) selected from a tetraalkoxysilane and its partially hydrolyzed condensate in an alcohol (preferably an alcohol corresponding to the alcohol contained in the treating alcohol), adding an alkaline solution (preferably, a solution of sodium hydroxide, potassium hydroxide or ammonium hydroxide) and precipitating and adhering powdery spherical silicon dioxide on the surface of particles of fluorescent substance. The particle size of the silicon dioxide is preferably brought to 0.05-1 µm. The amount of adhered powdery silicon dioxide is preferably 0.1-1 wt.% based on the fluorescent substance.

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